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MINUTES OF THE 432ND MEETING OF THE  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
JUNE 12-14, 1996  
ROCKVILLE, MARYLAND

The 432nd meeting of the Advisory Committee on Reactor Safeguards was held at Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on June 12-14, 1996. The purpose of this meeting was to discuss and take appropriate action on the items listed in the attached agenda. The meeting was open to public attendance. There was one request for time to make an oral statement from a member of the public regarding the meeting.

A transcript of selected portions of the meeting was kept and is available in the NRC Public Document Room at the Gelman Building, 2120 L Street, N.W., Washington, D.C. [Copies of the transcript are available for purchase from Neal R. Gross and Co., Inc., 1323 Rhode Island Avenue, N.W., Washington, D.C. 20005.]

ATTENDEES

ACRS Members: Dr. Thomas S. Kress (Chairman), Dr. George Apostolakis, Dr. Ivan Catton, Dr. Mario H. Fontana, Mr. William J. Lindblad, Dr. Don W. Miller, Dr. Dana A. Powers [did not attend Wednesday and Thursday], Dr. William J. Shack, and Mr. Charles J. Wylie. [For a list of other attendees, see Appendix III.]

I. CHAIRMAN'S REPORT (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

Dr. Thomas S. Kress, Committee Chairman, convened the meeting at 1:00 p.m. and reviewed the schedule for the meeting. He announced that Mr. John Barton, an ACRS nominee, was attending the meeting as an observer, and that Cindy Hsu was returning to the ACRS as a summer intern. He also drew the Committee's attention to a speech by Chairman Jackson to the Nuclear Energy Assembly on May 30, 1996.

II. Draft Regulatory Guide, DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (Open)

[Note: Dr. M. El-Zeftawy was the Designated Federal Official for this portion of the meeting.]

Introduction

Dr. Fontana, Chairman of the Plant License Renewal Subcommittee, stated that the purpose of this session was for the Committee to hear a presentation by the NRC staff regarding the Draft Regulatory

Guide, DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses;" and to hear a presentation by representatives of the Nuclear Energy Institute (NEI) regarding NEI 95-10, Revision 0.

#### NRC Staff Presentation

Mr. Scott Newberry, NRR, noted that in December 1991, NRC published 10 CFR Part 54 to establish the procedures, criteria, and standards governing nuclear plant license renewal. Since publishing the original rule, NRC and the industry had conducted various activities related to its implementation. In September 1994, NRC proposed an amendment to the rule. The final amendment was published in May 1995. It focuses on the effects of aging on long-lived passive structures and components and time-limited aging analyses. In addition, the amendment allows greater reliance on the current licensing basis, the Maintenance Rule, and existing plant programs.

Mr. Steve Hoffmann, NRR, stated that NEI had prepared a guideline document (NEI 95-10, Revision 0 - dated March 1996) that provides an industry guideline for implementing the License Renewal Rule.

Applicants interested in license renewal are responsible for the preparation of a plant-specific license renewal application that includes technical information such as an integrated plant assessment, current licensing basis changes during the NRC review of the application, a Final Safety Analysis Report (FSAR) supplement, and a supplement to the plant's environmental report that complies with the requirements of Subpart A of 10 CFR Part 51.

The NRC staff has prepared Draft Regulatory Guide, DG-1047, which provides a uniform format and content acceptable to NRC for structuring and presenting the information to be submitted in an application for license renewal. Conformance with this guide is not required; however, its use facilitates both preparation of a license renewal application by a licensee, and a timely and uniform review by the staff. A different format will be acceptable if it provides an adequate basis for approval.

The guidance provided in DG-1047 is expected to ensure that actions have been taken or will be taken regarding: 1) managing the effects of aging during the extended period of operation on the functionality of structures and components that have been identified to require review and 2) evaluating time-limited aging analyses that have been identified to require review, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis.



The Draft Guide (DG) endorses NEI 95-10, Rev. 0. The staff's future activities include visiting sites to review an industry demonstration program that will help validate the NEI document, conduct a public workshop during the comment period for the DG, review technical reports concerning specific systems, prepare Standard Review Plan guidance, prepare inspection guidance, and review license renewal applications.

A preliminary staff review determined that NEI 95-10 appears to contain the necessary guidance to implement the requirements of 10 CFR Part 54. Industry participants appear to have effectively implemented the NEI 95-10 guidance for scoping, screening, and identifying intended functions and aging effects consistent with the intent of the License Renewal Rule. The site visits are being used to assess and identify needed improvements to NEI 95-10 and to determine the level of detail for aging management programs, time-limited aging analyses, and FSAR supplements.

#### NEI Presentation

Mr. Doug Walters, NEI, outlined the major elements of NEI 95-10. These are:

- Identifying the systems, structures, and components within the scope of the rule;
- Identifying the intended functions of systems, structures, and components within the scope of the rule;
- Identifying the structures and components subject to aging management review;
- Assuring that effects of aging are managed;
- Application of inspections for license renewal;
- Identifying and resolving time-limited aging analyses;
- Identifying and evaluating exemptions containing time-limited aging analyses;
- Identifying a suggested format and content of a license renewal application; and
- Documenting the scoping process, the integrated plant assessment, and the evaluation of the time-limited aging analyses and exemptions.

The NEI 95-10 document also contains (as Appendices) typical structure, component, and commodity groupings and active/passive

determinations for the integrated plant assessment, as well as examples to demonstrate the license renewal process.

To validate the industry guidelines, NEI is implementing a license renewal demonstration program. This program will involve seven volunteer sites: Calvert Cliffs, Oconee, Point Beach, North Anna, Oyster Creek, Peach Bottom and Edwin Hatch. The observations included: 1) while the NEI 95-10 aging management discussion appears to be sufficient, it may need to be bolstered to address demonstration; 2) the level of detail in the license renewal application and FSAR supplement remains an open topic with the staff; and 3) further clarification on timing of time-limited aging analyses may be needed. Other items for consideration are operating experience, consumables, and the Unresolved Safety Issue/Generic Safety Issue review process.

The current schedule is for the staff to publish the Federal Register Notice regarding the DG-1047 in August 1996, requesting public comments. The industry demonstration program is expected to be completed by the end of October 1996. The staff is planning to hold a public workshop on October 29, 1996 and to publish the final Regulatory Guide-1047 by July 1997.

### Conclusion

The Committee plans to write a letter to the Executive Director for Operations regarding this matter.

### III. Individual Plant Examination Insights Report (Open)

[Note: Mr. S. Duraiswamy was the designated Federal Official for this portion of the meeting.]

Dr. Apostolakis, Chairman of the Subcommittee on Individual Plant Examinations (IPEs), introduced the topic to the Committee and reviewed the discussions of the IPE Subcommittee meeting held June 11-12, 1996. He noted that the Committee had previously reviewed portions of the IPE Insights Report during the 431st meeting of the ACRS, May 23-25, 1996. He stated that the IPE Insights Report was being prepared as a draft NUREG and that the NRC staff planned to have a workshop in January 1997 to discuss the proposed resolution of public comments.

### RES Presentation

Mr. Mark Cunningham, Chief, Probabilistic Risk Analysis Branch (PRAB), RES, and Ms. Mary Drouin, PRAB, RES, led the discussion for the NRC staff. They introduced their contractors, Mr. Allen Camp

of Sandia National Laboratory and Mr. John Lehner of Brookhaven National Laboratory, who provided supporting discussion.

The staff provided an overview of the IPE Insights Report which was developed to gain perspectives on plant designs and vulnerabilities. The perspectives were derived from 75 licensee IPE submittals covering 108 operating reactor units. The staff defined the scope of their review, which included consideration of Level 1 and 2 PRA results for full power operation and internal events. They stated that they did not evaluate the quality of IPEs nor did they consider external events (including fire) or other plant modes such as shutdown operations.

The staff summarized the objectives of the program related to reactor safety, reactor and containment design, the importance of operator actions, current IPEs as compared with state-of-the-art PRAs, and the Commission's safety goals. They also considered improvements identified as a result of the Station Blackout Rule, and comparison with insights gained from NUREG-1150, "Severe Accident Risks: An Assessment for Five Nuclear Power Plants." The staff summarized their observations and conclusions for each of the objectives. Significant points made during the discussion include:

- Only a few licensees identified vulnerabilities, but all identified safety enhancements or plant improvements. Most improvements were directed at reducing station blackout concerns.
- For BWRs: core damage frequency (CDF) did not decrease for newer BWR designs; CDF variability was primarily due to design/operation differences, modeling assumptions and data; and failure to depressurize was the dominant contributor to CDF.
- For PWRs: CDF variability was due primarily to plant-specific support system design and operational differences; support system failures were dominant contributors for most plants; and plants with better feed and bleed had lower CDFs.
- For BWRs: conditional containment failure probability (CCFP) for Mark-I containments had higher early structural failure versus later containments which were largely driven by drywell shell melt-through; bypass and containment isolation failure was generally not important for BWRs; and the large volumes of Mark-III containments were partially responsible for lower CCFPs.
- For PWRs: CCFP low early structural failure for ice condenser containments appeared to be driven by analysis

assumptions rather than design features; bypass, especially steam generator tube rupture, was important to early structural failure for both ice condensers and large dry and subatmospheric containments; and isolation failures were significant in a number of large dry containments.

- Concerns were identified in some IPEs relative to human reliability analysis, common-cause failures, data analysis, and success criteria. However, Level 1 methods were generally sound.
- Perspectives in IPEs were consistent with NUREG-1150 except that the likelihood of early containment failure was higher for ice condenser PWRs than for large dry containment designs.

Dr. Shack questioned whether most licensees tried to quantify the benefits of improvements and was advised by the staff that most licensees did not. The staff stated that most assessments were in the form of sensitivity studies.

Dr. Apostolakis questioned the extent to which uncertainty was considered in the analysis. This was followed by extensive discussion related to the types of uncertainty that may or may not have been considered (i.e., aleatory or epistemic). The staff stated that most IPEs did not address uncertainty. The staff also stated that uncertainty is more closely linked with state-of-the-art PRAs and that the IPEs addressed the more narrow scope defined in Generic Letter 88-20.

At the conclusion of the meeting, Dr. Apostolakis summarized his views on the draft IPE Insights Report. He detailed the schedule for future ACRS reviews and stated that he did not believe a letter would be appropriate at this time.

#### Conclusion

The Committee plans to continue their review of this matter as insights are integrated into NRC programs for risk-informed and performance-based regulation.

#### IV. Loss of Offsite Power at Catawba, Unit 2 (Open)

[Note: Mr. S. Duraiswamy was the Designated Federal Official for this portion of the Meeting.]

#### Introduction

Mr. Lindblad, Acting Chairman of the Plant Operations Subcommittee, introduced the topic to the Committee. He also introduced representatives of the NRC staff and representatives from Duke Power Company. Mr. Lindblad stated that the purpose of this presentation was to brief the Committee on a loss-of-offsite-power (LOOP) event that occurred on February 6, 1996 at Catawba, Unit 2. The primary focus of this meeting was on the Special Inspection Team Report (50-413/96-03) findings.

Mr. Wylie advised the Committee that he had a conflict of interest in this area.

#### NRC Presentation

Mr. Harold O. (Chris) Christensen, Chief, Maintenance Branch, DRS, Region II, led the discussions. Messrs. Edward Goodwin, Acting Chief, Events Assessment Branch, NRR, and Mike Tuckman, Senior Vice President, Nuclear Generation, Duke Power, provided supporting discussion.

Significant points made during the discussion were:

- Indications of intermittent electrical grounds were not properly analyzed by the control room staff the day prior to the LOOP event.
- The "2B" emergency diesel generator (EDG) was taken out of service on the morning of the event.
- Two main generator isophase bus potential transformers grounded out, causing a main generator and a reactor trip.
- The indicated electrical fault caused a loss of offsite AC power to Catawba, Unit 2. With the "2B" EDG out of service, only the "2A" EDG started, thus supplying AC power to the "A" train safeguards equipment.
- The steam generators cooled down, which lowered steam pressure to the safety injection actuation setpoint. The ensuing safety injection increased the water volume in the reactor coolant system, causing the pressurizer to go water solid.
- The pressurizer power-operated relief valve (PORV) cycled approximately 74 times. The PORV discharge over-pressurized the pressurizer relief tank (PRT), located inside the containment building. The PRT then relieved into containment, slightly increasing the containment pressure.



- A Notification of Unusual Event was declared.
- Full offsite power was restored during the morning of February 11, 1996.
- The root cause of this event was inadequate preventive maintenance of the isophase bus duct. This allowed moisture and foreign material to build up on the isolation bushings, creating an electrical path to ground (short) from the main generator output.
- Duke Power has replaced the potential transformer bushings with an improved design, inspected and repaired components, and enhanced the preventive maintenance program in this area.

#### Conclusion

This briefing was for information only.

#### V. Issues Associated with Steam Generators (Open)

[Note: Mr. N. Dudley was the Designated Federal Official for this portion of the meeting.]

#### Staff Presentation

Mr. Jack Strosnider, NRR, noted that the staff met with the Joint ACRS Subcommittees on Material & Metallurgy and Severe Accidents on June 3-4, 1996, to discuss steam generator issues. He provided an overview of the industry experience with steam generator tube degradation mechanisms and explained the reasons for pursuing rulemaking. Mr. Strosnider outlined the staff schedule for issuing a revised steam generator rule and the expected interactions with industry.

Mr. Strosnider explained the desired attributes of a performance-based, risk-informed rule, and the framework for the proposed rulemaking. He stated that deterministic and probabilistic structural performance criteria are under development. He explained that the criteria should be measurable, tolerable, enforceable, and able to embrace new forms of technology. Mr. Strosnider used a flow chart to explain the program strategy for assuring steam generator integrity. The steam generator rule is intended to maintain defense-in-depth through a balanced use of materials, systems, and radiological controls, as well as inspection, leakage monitoring, operator training, and emergency operating procedures.

Mr. Strosnider concluded the presentation by describing the safety assessment considerations and the unresolved technical issues. The unresolved issues included the risk of tube-induced failures under severe accident conditions, tube response to high temperatures, severe accident thermal hydraulic effects, and analyses of event trees.

Mr. Strosnider and the Committee Members discussed the methods for detecting tube degradation, the quality of data bases used to develop correlations, and the reason for assessing program elements in addition to performance criteria. They also discussed the importance of relating performance criteria to well defined and technically justified risk levels, and of quantifying the uncertainties in risk analyses. Dr. Catton suggested that accident management concepts, such as flooding the reactor vessel cavity, that would increase the challenge to steam generator tubes, needed to be included in the proposed rule. Dr. Kress suggested moving guidance for accessing program elements from the regulatory guide to the standard review plan.

#### Nuclear Energy Institute (NEI) Presentation

Mr. Alexander Marion, NEI, defined risk-based and performance-based regulations. The proposed framework described by Mr. Marion included a performance-based rule and a regulatory guide that would endorse industry implementing documents. The regulatory guide would provide performance criteria for structural integrity, accident leakage, and operational leakage. The industry document would describe a programmatic approach, condition monitoring, and operational assessments.

Mr. Marion noted that the NEI and NRC staffs have discussed regulatory guide items to determine whether the items should be performance-based criteria or requirements for programmatic activities. He stated that NEI planned to develop a white paper on how performance-based and risk-based regulatory approaches relate to the defense-in-depth concept.

Mr. Marion and the Committee Members discussed the meaning of licensee performance, the basis for the limit of  $10^{-2}$  spontaneous tube ruptures per reactor year, and uncertainties associated with the probability of event sequences.

#### Conclusion

The Committee decided to table a draft letter until the August 8-9, 1996 ACRS meeting.



VI. Browns Ferry Nuclear Plant, Unit 3 (Open)

[Note: Mr. S. Duraiswamy was the Designated Federal Official for this portion of the meeting.]

Introduction

Mr. Wylie, Chairman of the Plant Operations Subcommittee, introduced the topic to the Committee, and stated that the purpose of this session was to hold discussions with the representatives of Tennessee Valley Authority (TVA), the licensee for Browns Ferry Nuclear Plant (BFN) Unit 3, regarding the issues that led to the shutdown of BFN Unit 3 and the corrective actions taken by the licensee prior to restart. He further stated that this briefing was for information only.

Licensee presentation

Mr. Rick Machon, Vice President, Site Operations, led the discussions. Messrs. Pedro Salas, Site Licensing Manager and Gene Preston, Plant Manager, provided the supporting discussions.

Background Information on the Recovery of BFN Unit 3

Mr. Machon briefly discussed the root causes of BFN problems which led to the shutdown of BFN Unit 3. Significant points made during the discussion were:

- There was a lack of clear assignment of responsibility and authority to managers and their organizations. They also lacked clearly established accountability for performance.
- There was insufficient management involvement and control of the workplace leading to a failure to adequately establish the highest quality of performance.
- They failed to consistently maintain a documented design basis for the plant and failed to control the plant's configuration in accordance with that basis.
- Substantial room for improvement was noted in the areas of maintenance and regulatory commitment backlogs and plant material condition.
- BFN Units 1, 2, and 3 were placed on Category 3 of the NRC's watch list (requiring Commission approval prior to restart) in October 1986.

### Summary of Plant Upgrades

Mr. Machon presented briefly the following summary of the plant upgrades and extensive programmatic improvements that were made prior to restart of Units 2 and 3.

- Cable installation (including cable separation)
- Design Baseline and Verification Program
- Fire protection upgrades
- Procedure upgrades
- Recirculation system pipe replacement
- Replacement of the majority of electrical components inside the drywell

Mr. Machon described the overall effort to recover Unit 2. This effort involved revision of approximately 1500 engineering calculations, 5200 work plans, over 9 million crafts hours and approximately 14.8 million hours of engineering. BFN Unit 3 had a similar scope of work for its recovery.

Mr. Preston briefly presented lessons learned from the Unit 2 recovery, which provided the foundation for Unit 3's recovery. These lessons were incorporated into the entire recovery effort. Mr. Preston stated that TVA merged the recovery and operations organization for Unit 3 in the early spring of 1995 as the BFN Unit 3 entered into the testing and operating mode. At the completion of the testing activity, the site became a single operating organization that included site engineering, recovery engineering, and the plant modification group. This single operating organization is managed by a dedicated Assistant Plant Manager.

### Conclusion

This briefing was for information only.

### VII. Health Effects of Low Levels of Ionizing Radiation

[Note: Mr. N. Dudley was the Designated Federal Official for this portion of the meeting.]

### Introduction

Dr. Thomas Kress, Vice-Chairman of the Joint ACRS/ACNW Subcommittee, noted that the written comments received from two private

citizens, Mr. Theodore Rockwell and Mr. Al Tschaeché, had been distributed to all Members. He stated that the following presentations would repeat some of the information heard by the Subcommittee on March 26, 1996.

#### NRC Staff Presentation

Dr. John Glenn, NMSS, differentiated between the scientific development and regulatory use of the linear quadratic model of the health effects of low levels of ionizing radiation. He explained that scientific models are developed using existing data and are subject to peer review, while regulations are developed based on nationally and internationally accepted models, and on the need to balance the risks and benefits of using radioactive materials. Dr. Glenn stated that NRC is funding a study by the National Council on Radiation Protection and Measurements (NCRP) to assess the scientific bases for the present linear quadratic model. Similarly, the Interagency Steering Committee on Radiation Standards is funding a study by the National Academy of Sciences to determine the need for forming a BIER VII Committee.

Dr. Glenn and the Committee discussed other government agencies that set radiation standards, the risk standard used in developing regulations, and the basis for the staff regulatory limits. They discussed the composition and selection of members for the NCRP Study and the role of the group advisor.

#### NRC Visiting Medical Fellow Presentation

Dr. Myron Pollycove, NRC Visiting Medical Fellow, explained the biology associated with somatic mutation-causing cancers. He presented the results of scientific studies concerning radium malignancies, lung and breast cancers, atomic bomb survivors, and nuclear shipyard workers. He concluded that proper evaluation of the data from the studies demonstrates a hormetic effect in response to low levels of radiation. He expressed the opinion that scientific data that did not confirm the linear, no-threshold (LNT) hypothesis had been overlooked or suppressed by some professional health physics societies and organizations.

Dr. Pollycove explained the mechanism for radiation damage in mammalian cells, and the different cell repair mechanisms. He discussed the reasons for the difference in responsiveness of cell repair mechanisms at high and low radiation doses. To support the existence of repair mechanisms, Dr. Pollycove presented the results of research studies on basal cell carcinoma, mouse splenic cells, and low dose radiotherapy of non-Hodgkins lymphoma. He explained how Mulgavkar's model describing lung carcinogenesis induced by radon was improved by including the effect of the stimulation of repair mechanisms by low radiation doses.

Dr. Pollycove and the Committee discussed cancers caused by mechanisms other than radiation, statistical methods used to fit a curve to research data, and the uncertainty associated with the data.

#### Invited Expert Presentation

Dr. Marvin Goldman, Professor of Surgical and Radiological Sciences, University of California, Davis, and current President of the Health Physics Society, stated that risk assessments and regulations must be based on sound science. He explained the origins of the LNT hypothesis and expressed the opinion that the hypothesis should be reexamined. Dr. Goldman noted that the LNT hypothesis was based on the assumption that high radiation dose effects can be extrapolated to low radiation dose effects. He presented the following studies, which do not support the assumption:

- animal studies,
- radiation treatment of men for ankylose enspondylitis in the 1940's,
- radiation therapy of women for cervical cancer,
- health effects data for the civilian populations living downstream of two plutonium production facilities in Russian, and
- health effects data for populations living downwind of the Chernobyl accident.

Dr. Goldman stated that he believed in the hormetic effect of radiation, but was not convinced that hormesis is beneficial in terms of cancer risk. He warned that confounding factors must be carefully considered when reviewing data. He noted that when science is able to reduce the uncertainties associated with research studies, then regulators would be able to rely on less conservative models. Dr. Goldman concluded that it was ridiculous to use collective dose as a means of determining risk.

Dr. Goldman noted that the NCRP, as an organization, was the primary author of the LNT hypothesis. He left open the question of whether the NCRP could be objective in reexamining the LNT hypothesis. Dr. Goldman concluded that neither the NCRP structure nor internal works should be impeded.

Dr. Goldman and the Committee Members discussed the effect of the political process on regulations, the difference between the regulatory and scientific model, the reason studies are not conducted on the effects of low levels of radiation, and the diversity of the specialists on the NCRP working group.

### Private Citizen Presentation

Dr. Theodore Rockwell, private citizen, stated that the use of the LNT hypothesis in the regulatory process was costing lives and tremendous amounts of money. He provided the following examples:

- After the Chernobyl accident, upward of 100,000 women chose to have abortions based on the fear of delivering deformed babies.
- Consumer groups recommend removing fire detectors because "no amount of radiation is harmless."
- The estimated cost of returning contaminated sites to background conditions is expensive, while there are no proven health benefits.

Dr. Rockwell, Dr. Goldman, and the Committee Members discussed the origins, official standing, and selection process of the NCRP. They also discussed the relationship of NCRP recommendations to regulatory decisions.

### Conclusion

Based on the information briefing, the Committee decided not to participate in the report prepared by the ACNW concerning this matter.

### VIII. EXECUTIVE SESSION (Open)

[Note: Dr. J. Larkins was the Designated Federal Official for this portion of the meeting.]

#### A. Reports, Letters and Memoranda

Severe Accident Research (Report to Shirley Ann Jackson, Chairman, NRC, from T.S. Kress, Chairman, ACRS, dated June 28, 1996.)

Draft Regulatory Guide DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (Letter to James M. Taylor, Executive Director for Operations, from T.S. Kress, Chairman, ACRS, dated June 18, 1996)

#### B. Reconciliation of ACRS Comments and Recommendations

[Note: Mr. S. Duraiswamy was the Designated Federal Official for this portion of the meeting.]

The Committee discussed the response from the NRC Executive Director for Operations to ACRS comments and recommendations included in recent ACRS reports:

EDO letter dated May 24, 1996, responding to the ACRS report dated April 22, 1996, concerning the Proposed Revisions to 10 CFR Parts 50 and 100 and Proposed Regulatory Guides Relating to Reactor Site Criteria.

The Committee decided that it was satisfied with the EDO response.

#### LETTER FROM CHAIRMAN JACKSON

The Committee discussed a letter from Chairman Jackson dated June 3, 1996, responding to ACRS comments and recommendations included in the ACRS report dated April 23, 1996, concerning Probabilistic Risk Assessment Framework, Pilot Applications, and Next Steps to Expand the Use of PRA in the Regulatory Decision-Making Process.

The Committee plans to continue its review of issues associated with risk-informed and performance-based regulations. Also, the Committee plans to look at the emerging policy issues identified in the May 15, 1996 Staff Requirements Memorandum and provide recommendations to the Commission.

#### C. Report on the Meeting of the Planning and Procedures Subcommittee (Open)

The Committee heard a report from Dr. Kress on the Planning and Procedures Subcommittee meeting held on June 10, 1996. The following items were discussed:

##### 1. QUADRIPARTITE MEETING

A letter has been sent to the Japanese Nuclear Safety Commission (with copies sent to the Germans and French) referring to a fall 1997 Quadripartite Meeting, including proposed agenda items for them to consider.

#### RECOMMENDATION

The Subcommittee recommends that the Committee wait for a reply from the Japanese Safety Commission before proceeding any further. It was mentioned that the agenda may dictate which ACRS members attend this meeting.



2. DEPARTMENT OF ENERGY/NRC MEMORANDUM OF UNDERSTANDING (MOU)

The NRC and DOE have signed an MOU to establish the protocol (basis for review and consultation) with respect to possible DOE acquisition of commercial light-water reactors for tritium production. The NRC would have to review and license such a facility and process.

RECOMMENDATION

This material was provided for information only.

3. ACRS RETREAT

A retreat for ACRS Members and ACRS Senior Management, is being scheduled for October 17-18, 1996 in Annapolis, Maryland. Dr. Seale has been assigned the responsibility for developing an agenda for the retreat and assignments for the Members. Hotel accommodations are being sought.

RECOMMENDATION

The Committee had previously agreed to a retreat in September 1996, but there were no accommodations available at that time in Annapolis or Baltimore. Every ACRS member was polled on alternative dates and, except for one member, the dates of October 17-18, 1996, were agreed to.

Dr. Kress suggested that the agenda be limited to only a few (2 or 3 at most) items, such as Regulatory Philosophy and ACRS Activities, with several subtopics.

Dr. Kress proposed that members suggest subissues and develop a strawman position to establish the points of discussion. Dr. Larkins suggested that the Committee take a look at the Bylaws again. Issues proposed for discussion should be forwarded to Dr. Seale prior to the August 1996 Full Committee meeting.

4. SUMMER EMPLOYEES

Three new summer employees have joined or will be joining the ACRS/ACNW staff. Ms. Cindy Hsu and Ms. Chris Lootens have worked for ACRS previously. [The third employee was later withdrawn.]



#### RECOMMENDATION

This material was provided for information only.

#### 5. IMPLEMENTATION OF CWS PILOT PROGRAM

The Office of Personnel approved for one year the request by the Executive Director, ACRS/ACNW, to implement a compressed work schedule (CWS) pilot program. This program will provide the staff more flexibility in scheduling their hours during the pay periods in which Full Committee meetings occur. Under the CWS pilot program, staff members have the option to schedule their hours to coincide with the extended weekday and Saturday hours on which the Committees meet, so that they are paid for the actual hours worked. Participation in this program should alleviate the regular and recurring unpaid overtime worked by engineers and staff scientists. To implement the program, the ACRS staff negotiated with the union that future ACRS and ACNW Full Committee meetings would be scheduled during the first week of the pay period, where practicable.

#### RECOMMENDATION

Dr. Kress and Dr. Shack thought this was a good idea. Dr. Larkins said it was not final yet, and that there would be another meeting with the union. He also mentioned that there were a lot of restrictions such as not splitting pay periods. To the extent practical, meetings should be scheduled for the first full week of the month so we can meet this criteria. This will prohibit us from changing meeting dates once they are set.

#### 6. CONSULTANT PERFORMANCE EVALUATION

To provide enhanced accountability on the use of consultants, a systematic process should be established for evaluating the performance of ACRS consultants. As a follow-on to each Subcommittee meeting, a written evaluation would be made of the consultant's performance at the meeting and the quality of the consultant's reports. This would be based on the input from members participating in the meeting.

#### RECOMMENDATION

It was suggested that a form be developed. Dr. Kress thought it should be signed by the Subcommittee Chairman,

who can solicit comments from the Subcommittee Members if so desired. He also wanted to know who would be responsible for filling the form out and getting it signed. Dr. Larkins thought the engineer could do this. Dr. Kress did not believe that this was an appropriate function for the engineers and that only the Members were qualified to make such assessments. This process could help determine which consultants the Committee should continue using and would provide greater accountability.

7. DINNER WITH CHAIRMAN JACKSON

Chairman Jackson invited Drs. Kress, Catton, Apostolakis and Larkins to a dinner meeting on June 11, 1996.

RECOMMENDATION

Information will be provided to the Committee during the meeting.

8. TRAVEL

A request was received from Dr. Catton to attend an international meeting in Park City, Utah, where he will be giving a paper on lower cavity flooding.

RECOMMENDATION

The Subcommittee recommended that the travel request be approved.

9. MEMBERS' ISSUES

- In a recent memorandum, Mr. Carroll recommended that the Committee streamline its discussion of administrative and procedural matters and spend more time on policy issues and strategic planning.
- In a second memorandum, Mr. Carroll commented on the memos from Dr. Powers concerning the health effects of low levels of ionizing radiation.
- Mr. Lindblad requested that the ACRS Executive Director confer with the Office of the General Counsel on whether there is a statutory requirement for the ACRS to review the design changes submitted by General Electric for the ABWR design. Mr. Martin Malsch, Deputy General Counsel for the NRC, noted in a conversation that, in his opinion, a statutory requirement exists, particularly if the

changes are safety significant. Subsequently, the Commission has, as part of the SRM on the recent meeting with the ACRS, requested the Committee to review GENE's recent submittal containing safety-significant design changes prior to a Commission briefing on this subject in August 1996.

- Mr. Lindblad's comments on the issue of the proposed joint letter with the ACNW were reviewed.

#### RECOMMENDATION

Regarding the first item, the Planning and Procedures Subcommittee found that, while the May meeting was an unusual meeting, some of Mr. Carroll's comments on streamlining the prolonged discussions were reasonable.

It was generally agreed that a firm meeting schedule should be established in October or November for the coming year and not be changed.

The ACRS should vote on whether there is enough support to have a joint letter on the health effects of low-level radiation. Also there should be a discussion of a joint letter where the Committee had additional comments.

Regarding the third item, the Planning and Procedures Subcommittee felt that the issue had been addressed.

#### D. Future Meeting Agenda

Appendix IV summarizes the proposed items endorsed by the Committee for the 433rd ACRS Meeting, August 8-10, 1996.

The 432nd ACRS meeting was adjourned at 5:55 p.m. on Friday, June 14, 1996.

Washington, D.C. 20544; Telephone Number: (202) 273-1813.

Susan Jensen-Cooklin,

Deputy Counsel.

[PR Doc. 96-13837 Filed 6-3-96; 8:45 am]

BILLING CODE 6930-26-P

## NUCLEAR REGULATORY COMMISSION

[Docket No.: 27-47]

**Consideration of Application for Renewal of a License To Dispose of Low-Level Radioactive Waste Containing Special Nuclear Material by Chem-Nuclear Systems, Inc., and Opportunity for a Hearing**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of consideration of an application for renewal of a license to dispose of low-level radioactive waste containing special nuclear material by Chem-Nuclear Systems, Inc., and opportunity for a hearing.

The Nuclear Regulatory Commission (NRC) is considering the renewal of License No. 12-13536-01. This license is issued to Chem-Nuclear Systems, Inc. (CNSI) for the disposal of wastes containing special nuclear material (SNM) in the low-level radioactive waste (LLW) disposal facility, located near Barnwell, South Carolina. NRC licenses this facility under 10 CFR Part 70. The license renewal application was submitted on April 10, 1996.

The LLW disposal facility located near Barnwell, South Carolina, is licensed by the State of South Carolina for disposal of source and byproduct material. The NRC license allows the disposal of SNM, and acknowledges that the State's regulated activities constitute the major site activities. As a result, NRC relies extensively on the State's regulatory program to evaluate the facility and licensee's capability to demonstrate reasonable assurance that the disposal of LLW can be accomplished safely. To this end, NRC coordinates the review and assessment of the license with the State of South Carolina Department of Health and Environmental Control. To avoid a duplicate effort, NRC has identified several areas in which it relies primarily on the State regulatory program. Areas distinct to SNM regulation are directly evaluated by NRC. Under the NRC license, several State identified license conditions are referenced. This approach ensures that NRC is aware of significant licensee activities requiring State regulatory action. Additionally,

NRC incorporates conditions in the SNM license which provide NRC the latitude to enforce the Agreement State license conditions, if NRC determines such action is necessary. Finally, the NRC license does not abrogate or diminish the authority of the State governed by its agreement under section 274b of the Atomic Energy Act of 1954, as amended, with NRC, to regulate, inspect or otherwise exercise control of operations, with respect to the source and byproduct material, for disposal of that material at the LLW disposal facility at Barnwell, South Carolina.

Prior to the issuance of the proposed renewal, NRC will have made findings required by the Atomic Energy Act of 1954, as amended, and NRC's regulations. These findings will be documented in a Safety Evaluation Report and an Environmental Assessment.

The NRC provides notice that this is a proceeding on an application for a license amendment falling within the scope of Subpart L, "Informal Hearing Procedures for Adjudication in Materials Licensing Proceedings," of NRC's rules and practice for domestic licensing proceedings in 10 CFR Part 2. Pursuant to § 2.1205(a), any person whose interest may be affected by this proceeding may file a request for a hearing in accordance with § 2.1205(c). A request for a hearing must be filed within thirty (30) days of the date of publication of this Federal Register notice.

The request for a hearing must be filed with the Office of the Secretary either:

1. By delivery to the Docketing and Service Branch of the Secretary at One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738; or

2. By mail or telegram addressed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555. Attention: Docketing and Service Branch

In addition to meeting other applicable requirements of 10 CFR Part 2 of the NRC's regulations, a request for a hearing filed by a person other than an applicant must describe in detail:

1. The interest of the requester in the proceeding;

2. How that interest may be affected by the results of the proceeding, including the reasons why the requestor should be permitted a hearing, with particular reference to the factors set out in § 2.1205(g);

3. The requestor's areas of concern about the licensing activity that is the subject matter of the proceeding; and

4. The circumstances establishing that the request for a hearing is timely in accordance with § 2.1205(c).

In accordance with 10 CFR § 2.1205(e), each request for a hearing must also be served, by delivering it personally or by mail, to:

1. The applicant, Chem-Nuclear Systems, Inc., 140 Stoneridge Drive, Columbia, South Carolina 29210, Attention: Mr. William B. House, and;

2. The NRC staff, by delivery to the Executive Director for Operations, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852, or by mail, addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

For further details with respect to this action, the application for amendment request is available for inspection at the NRC's Public Document Room, 2120 L Street NW., Washington, DC 20555.

### FOR FURTHER INFORMATION CONTACT:

Timothy E. Harris, Low-Level Waste and Decommissioning Projects Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Telephone: (301) 415-6613. Fax: (301) 415-5398.

Dated at Rockville, Maryland, this 28th day of May, 1996.

For the Nuclear Regulatory Commission.

Robert A. Nelson,

Acting Chief, Low-Level Waste and Decommissioning Projects Branch, Division of Waste Management, Office of Nuclear Material Safety and Safeguards.

[PR Doc. 96-13877 Filed 6-3-96; 8:45 am]

BILLING CODE 7930-01-P

### Advisory Committee on Reactor Safeguards; Meeting Notice

To carry out the responsibilities set forth in Sections 29 and 182b of the Atomic Energy Act (42 U.S.C. 2039, 2232b), the Advisory Committee on Reactor Safeguards will hold a meeting on June 12-14, 1996, in Conference Room T-2B3, 11545 Rockville Pike, Rockville, Maryland. The date of this meeting was previously published in the Federal Register on Monday, November 27, 1995 (60 FR 58393).

Wednesday, June 12, 1996

1:00 P.M.-1:15 P.M.: Opening Remarks by the ACRS Chairman (Open)—The ACRS Chairman will make opening remarks regarding conduct of the meeting and comment briefly regarding items of current interest. During this session, the Committee will discuss priorities for preparation of ACRS reports.



**1:15 P.M.-2:45 P.M.: Draft Regulatory Guide, DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the draft Regulatory Guide, DG-1047.

Representatives of the nuclear industry will participate, as appropriate.

**2:45 P.M.-3:45 P.M.: IPE Insights Report (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and its contractors regarding the Individual Plant Examination (IPE) Insights Report.

Representatives of the nuclear industry will participate, as appropriate.

**4:00 P.M.-5:00 P.M.: Loss of Offsite Power at Catawba, Unit 2 (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the findings and recommendations of the NRC Special Inspection Team which investigated the loss of offsite power event that occurred on February 6, 1996 at the Catawba Nuclear Plant, Unit 2.

Representatives of the licensee will participate, as appropriate.

**5:00 P.M.-5:30 P.M.: Future ACRS Activities (Open)**—The Committee will discuss recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future meetings.

**5:30 P.M.-6:15 P.M.: Report of the Planning and Procedures Subcommittee (Open/Closed)**—The Committee will hear a report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS staff.

A portion of this session may be closed to discuss organizational and personnel matters that relate solely to the internal personnel rules and practices of this Advisory Committee, and matters the release of which would constitute a clearly unwarranted invasion of personal privacy.

**6:15 P.M.-7:00 P.M.: Preparation of ACRS Reports (Open)**—The Committee will discuss proposed ACRS reports on matters considered during this meeting as well as a proposed ACRS report on Severe Accident Research.

#### Thursday, June 13, 1996

**8:30 A.M.-8:35 A.M.: Opening Remarks by the ACRS Chairman (Open)**—The ACRS Chairman will make

opening remarks regarding conduct of the meeting.

**8:35 A.M.-9:30 A.M.: Issues Associated with Steam Generators (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding issues associated with steam generators. Also, briefing by and discussions with representatives of the Nuclear Energy Institute regarding the MAAP Code.

Representatives of other interested parties will participate, as appropriate.

**9:30 A.M.-11:00 A.M.: Browns Ferry Nuclear Plant, Unit 3 (Open)**—The Committee will hear presentations by and hold discussions with representatives of the licensee (Tennessee Valley Authority) and the NRC staff regarding issues that led to the shutdown of Browns Ferry Unit 3, and the corrective actions taken by the licensee prior to restart.

**11:15 A.M.-11:30 A.M.: Reconciliation of ACRS Comments and Recommendations (Open)**—The Committee will discuss responses from the NRC Executive Director for Operations (EDO) to comments and recommendations included in recent ACRS reports, including the EDO response to the April 22, 1996 ACRS report on Proposed Revisions to 10 CFR Parts 50 and 100 and Proposed Regulatory Guides Relating to Reactor Site Criteria.

**12:30 P.M.-7:00 P.M.: Preparation of ACRS Reports (Open)**—The Committee will continue discussion of proposed ACRS reports on matters considered during this meeting as well as a proposed ACRS report on Severe Accident Research.

#### Friday, June 14, 1996

**8:30 a.m.-8:35 a.m.: Opening Remarks by the ACRS Chairman (Open)**—The ACRS Chairman will make opening remarks regarding conduct of the meeting.

**8:35 a.m.-10:00 a.m.: Health Effects of Low-Levels of Ionizing Radiation (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff, Health Physics Society, and invited experts regarding the health effects of low-levels of ionizing radiation.

Representatives of the nuclear industry and other interested parties will participate, as appropriate.

**10:15 A.M.-11:45 A.M.: NRC Policy Regarding the Use of Potassium Iodide after a Severe Accident (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the NRC policy associated

with the use of potassium iodide after a severe accident and the potential risk associated with the use of potassium iodide.

Representatives of the nuclear industry will participate, as appropriate.

**12:45 P.M.-6:00 P.M.: Preparation of ACRS Reports (Open)**—The Committee will continue discussion of proposed ACRS reports on matters considered during this meeting as well as a proposed ACRS report on Severe Accident Research.

Procedures for the conduct of and participation in ACRS meetings were published in the Federal Register on September 27, 1995 (60 FR 49925). In accordance with these procedures, oral or written statements may be presented by members of the public, electronic recordings will be permitted only during the open portions of the meeting, and questions may be asked only by members of the Committee, its consultants, and staff. Persons desiring to make oral statements should notify Mr. Sam Duraiswamy, Chief, Nuclear Reactors Branch, at least five days before the meeting, if possible, so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture, and television cameras during this meeting may be limited to selected portions of the meeting as determined by the Chairman.

Information regarding the time to be set aside for this purpose may be obtained by contacting the Chief of the Nuclear Reactors Branch prior to the meeting. In view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the Chief of the Nuclear Reactors Branch if such rescheduling would result in major inconvenience.

In accordance with Subsection 10(d) P.L. 92-463, I have determined that it is necessary to close portions of this meeting noted above to discuss matters that relate solely to the internal personnel rules and practices of this Advisory Committee per 5 U.S.C. 552h(c)(2), and to discuss matters the release of which would constitute a clearly unwarranted invasion of personal privacy per 5 U.S.C. 552b(c)(6).

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by contacting Mr. Sam Duraiswamy, Chief, Nuclear Reactors Branch (telephone 301/415-7364), between 7:30 A.M. and 4:15 P.M. EDT.

ACRS meeting notices, meeting transcripts, and letter reports are now available on FedWorld from the "NRC MAIN MENU." Direct Dial Access number to FedWorld is (800) 863-9672; the local direct dial number is 703-321-3339.

The 433rd ACRS meeting will be held on August 8-10, 1996.

Dated: May 29, 1996.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. 96-13872 Filed 6-3-96; 8:45 am]

BILLING CODE 7590-01-F

### Sunshine Act Meeting

AGENCY HOLDING THE MEETING: Nuclear Regulatory Commission.

DATE: Weeks of June 3, 10, 17, and 24, 1996.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

MATTERS TO BE CONSIDERED:

Week of June 3

Thursday, June 6

3:30 p.m.—Affirmation Session (PUBLIC MEETING) (if needed)

Week of June 10—Tentative

Wednesday, June 12

3:00 p.m.—Briefing on Part 100 Final Rule on Reactor Site Criteria (PUBLIC MEETING) (Contact: Charles Ader, 301-415-5622)

4:30 p.m.—Affirmation Session (PUBLIC MEETING) (if needed)

Week of June 17—Tentative

Tuesday, June 18

10:00 a.m.—Briefing on Status of NRC Operator Licensing Initial Examination Pilot Process (PUBLIC MEETING) (Contact: Stuart Richards, 301-415-1031)

11:30 a.m.—Affirmation Session (PUBLIC MEETING) (if needed)

Week of June 24—Tentative

Tuesday, June 25

10:00 a.m.—Briefing on Operating Reactors and Fuel Facilities (PUBLIC MEETING)

Wednesday, June 26

11:30 a.m.—Affirmation Session (PUBLIC MEETING) (if needed)

2:30 p.m.—Meeting with Advisory Committee on Nuclear Waste (ACNW) (PUBLIC MEETING)

\* The schedule for commission meetings is subject to change on short notice. To verify the status of meetings call (recording)—(301) 415-1292. Contact person for more information: Bill Hill (301) 415-1661.

This notice is distributed by mail to several hundred subscribers; if you no

longer wish to receive it, or would like to be added to it, please contact the Office of the Secretary, Attn: Operations Branch, Washington, D.C. 20555 (301-415-1963).

In addition, distribution of this meeting notice over the internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to alb@nrc.gov or gkt@nrc.gov.

\* \* \* \* \*

William M. Hill, Jr.,

SECY Tracking Officer, Office of the Secretary.

[FR Doc. 96-14107 Filed 5-31-96; 2:46 pm]

BILLING CODE 7590-01-40

### OFFICE OF PERSONNEL MANAGEMENT

#### Excepted Service

AGENCY: Office of Personnel Management.

ACTION: Notice.

SUMMARY: This gives notice of positions placed or revoked under Schedules A and B, and placed under Schedule C in the excepted service, as required by Civil Service Rule VI, Exceptions from the Competitive Service.

FOR FURTHER INFORMATION CONTACT:

Patricia Paige, (202) 606-0830.

SUPPLEMENTARY INFORMATION: The Office of Personnel Management published its last monthly notice updating appointing authorities established or revoked under the Excepted Service provisions of 5 CFR part 213 on May 3, 1996 (61 FR 19963). Individual authorities established or revoked under Schedules A and B and established under Schedule C during the period, April 1, 1996, through April 31, 1996, appear in the listing below. An established Schedule B authority not previously recorded for March 1996 is also listed below. Future notices will be published on the fourth Tuesday of each month, or as soon as possible thereafter. A consolidated listing of all authorities as of June 30 will also be published.

#### Schedule A

No Schedule A authorities were established in April 1996.

The following Schedule A authorities were revoked:

#### National Labor Relations Board

Election Examiners for temporary, part-time, or intermittent employment in connection with elections under the Labor-Management Relations Act. Effective April 15, 1996.

#### Office of Personnel Management:

Not to exceed 500 positions in Federal Job Information Centers, to be filled under the community Outreach Information Network Program. Effective April 11, 1996.

#### Department of State

International Boundary Commission, U.S. and Canada

Temporary and intermittent field employees such as instrumentmen, foremen, recorders, packers, cooks, and axemen, for not to exceed 180 working days within any 1 calendar year. Effective April 15, 1996.

#### Department of Transportation

U.S. Coast Guard

Not to exceed 25 positions of Marine Traffic Controllers (Pilot), at grade GS-11 and below for temporary, intermittent, or seasonal employment in the State of Louisiana. Effective April 26, 1996.

#### Federal Highway Administration

Temporary, intermittent, or seasonal employment in the field service of the Federal Highway Administration at grades not higher than GS-5 for subprofessional engineering aide work on highway surveys and construction projects. Effective April 26, 1996.

#### Schedule B

One Schedule B authority was established:

#### Department of Veterans Affairs

Not to exceed 25 Criminal Investigator (Undercover) positions, GS 1811, in grades 5 through 12, conducting undercover investigations in the Veterans Health Administration supervised by the VA, Office of Inspector General. Initial appointments shall be greater than 1 year, but not exceed 4 years and may be extended indefinitely in 1-year increments. Effective March 28, 1996.

#### Schedule C

The following Schedule C authorities were established in April 1996:

#### Department of Agriculture

Confidential Assistant to the Administrator, Food and Nutrition Service. Effective April 10, 1996.

Confidential Assistant to the Administrator, Animal and Plant Health Inspection Service. Effective April 18, 1996.

Confidential Assistant to the Administrator, Food and Safety Inspection Service. Effective April 24, 1996.



APPENDIX II  
UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

REVISED  
June 10, 1996

SCHEDULE AND OUTLINE FOR DISCUSSION  
432nd ACRS MEETING  
JUNE 12-14, 1996

Wednesday, June 12, 1996, Conference Room 2B3, Two White Flint North,  
Rockville, Maryland

1) 1:0<sup>2</sup>~~7~~ - 1:1<sup>0</sup>~~8~~ P.M.

Opening Remarks by the ACRS Chairman (Open)

- 1.1) Opening Statement (TSK/SD)
- 1.2) Items of Current Interest  
(TSK/JTL/SD)
- 1.3) Priorities for Preparation of ACRS  
Reports (TSK/SD)

2) 1:1<sup>0</sup>~~8~~ - 2:4<sup>2</sup>~~8~~ P.M.

Draft Regulatory Guide, DG-1047, "Standard  
Format and Content for Applications to  
Renew Nuclear Power Plant Operating  
Licenses" (Open) (MHF/MME)

- 2.1) Remarks by the Subcommittee Chairman
- 2.2) Briefing by and discussions with  
representatives of the NRC staff  
regarding the draft Regulatory Guide,  
DG-1047.

Representatives of the nuclear industry will  
participate, as appropriate.

3) 2:45 - 3:4<sup>5</sup>~~5~~ P.M.

IPE Insights Report (Open) (GA/MTM)

- 3.1) Remarks by the Subcommittee Chairman
- 3.2) Briefing by and discussions with  
representatives of the NRC staff  
regarding the Individual Plant  
Examination (IPE) Insights Report.

Representatives of the nuclear industry will  
participate, as appropriate.

3:4<sup>5</sup>~~5~~ - 4:00 P.M.

BREAK

{ TRANSCRIBED PORTIONS OF THE MEETING. }



4) 4:00<sup>10</sup> - 5:00 P.M.

Loss of Offsite Power at Catawba, Unit 2  
(Open) (WJL/PAB/BH)

- 4.1) Remarks by the Acting Subcommittee Chairman
- 4.2) Briefing by and discussions with representatives of the NRC staff regarding the findings and recommendations of the NRC Special Inspection Team which investigated the loss of offsite power event that occurred on February 6, 1996 at the Catawba Nuclear Plant, Unit 2.

Representatives of the licensee will participate, as appropriate.

5) 5:00 - 5:30 P.M.

Future ACRS Activities (Open) (TSK/SD)  
Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future meetings.

6) 5:30 - 6:15 P.M.

Report of the Planning and Procedures Subcommittee (Open/Closed) (TSK/JTL)  
Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS staff.

[Note: A portion of this session may be closed to discuss organizational and personnel matters that relate solely to the internal personnel rules and practices of this Advisory Committee, and matters the release of which would constitute a clearly unwarranted invasion of personal privacy.]

7) 6:15 - 7:00<sup>5</sup> P.M.

Preparation of ACRS Reports (Open)  
Discussion of proposed ACRS reports on:  
7.1) Severe Accident Research (MHF/NFD)  
7.2) Draft Regulatory Guide Associated with the License Renewal Rule (MHF/MME)

Thursday, June 13, 1996, Conference Room 2B3, Two White Flint North,  
Rockville, Maryland

- |     |                    |   |
|-----|--------------------|---|
| 8)  | 8:30 - 8:35 A.M.   | <u>Opening Remarks by the ACRS Chairman</u> (Open)<br>(TSK/SD)  |
| 9)  | 8:35 - 9:30 A.M.   | <u>Issues Associated with Steam Generators</u><br>(Open) (RLS/NFD/BH)<br>9.1) Remarks by the Acting Subcommittee<br>Chairman<br>9.2) Briefing by and discussions with<br>representatives of the NRC staff<br>regarding issues associated with the<br>steam generators. Also, briefing by<br>and discussions with representatives<br>of the Nuclear Energy Institute<br>regarding the MAAP Code.<br><br>Representatives of other interested parties<br>will participate, as appropriate. |
| 10) | 9:30 - 11:00 A.M.  | <u>Browns Ferry Nuclear Plant, Unit 3</u> (Open)<br>(CJW/AS)<br>10.1) Remarks by the Subcommittee Chairman<br>10.2) Briefing by and discussions with<br>representatives of the licensee<br>(Tennessee Valley Authority) and the<br>NRC staff regarding issues that led<br>to the shutdown of Browns Ferry Unit<br>3, and the corrective actions taken<br>by the licensee prior to restart.  |
|     | 11:00 - 11:15 A.M. | BREAK   |
| 11) | 11:15 - 11:30 A.M. | <u>Reconciliation of ACRS Comments and<br/>Recommendations</u> (Open) (TSK, et al./SD,<br>et al.)<br>Discussion of the responses from the NRC<br>Executive Director for Operations to<br>comments and recommendations included in<br>recent ACRS reports.   |
|     | 11:30 - 12:30 P.M. | LUNCH   |

12) 12:30 - 7:00 P.M.  
(3:00 - 3:15 BREAK)

Preparation of ACRS Reports (Open)  
Discussion of proposed ACRS reports on:  
12.1) Severe Accident Research (MHF/NFD)  
12.2) Draft Regulatory Guide Associated  
with the License Renewal Rule  
(MHF/MME)  
12.3) IPE Insights Report (GA/MTM)  
12.4) Steam Generator Tube Issues  
(RLS/NFD/BH)

Friday, June 14, 1996, Conference Room 2B3, Two White Flint North,  
Rockville, Maryland

13) 8:30 - 8:35 A.M.

Opening Remarks by the ACRS Chairman (Open)  
(TSK/SD)

14) 8:35 - <sup>12:00</sup>~~10:00~~ A.M.

Health Effects of Low-Levels of Ionizing  
Radiation (Open) (TSK/NFD)  
14.1) Remarks by the Subcommittee Chairman  
14.2) Briefing by and discussions with  
representatives of the NRC staff,  
Health Physics Society, and invited  
experts regarding the health effects  
of low-levels of ionizing radiation.

Representatives of the nuclear industry and  
other interested parties will participate,  
as appropriate.

<sup>50</sup>  
10:00 - <sup>11:00</sup>~~10:15~~ A.M.

BREAK

15) ~~10:15~~ - ~~12:00~~ Noon  
Postponed until afternoon

Preparation of ACRS Reports (Open)  
Discussion of proposed ACRS reports on:  
15.1) Severe Accident Research (MHF/NFD)  
15.2) Draft Regulatory Guide Associated  
with the License Renewal Rule  
(MHF/MME)  
15.3) IPE Insights Report (GA/MTM)  
15.4) Health Effects of Low-Levels of  
Ionizing Radiation (TSK/NFD)  
15.5) Steam Generator Tube Issues  
(RLS/NFD/BH)

12:00 - 1:00 P.M. LUNCH

16) 12:45 - <sup>5:55</sup>~~6:00~~ P.M. Preparation of ACRS Reports (Open)  
Continue discussion of proposed ACRS reports  
listed under Item 15.

- NOTE:
- Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.
  - Number of copies of the presentation materials to be provided to the ACRS - 35.

12:00<sup>8</sup> - 1:00 P.M. LUNCH

16) 12:45 - <sup>5:55</sup>~~6:00~~ P.M. Preparation of ACRS Reports (Open)  
Continue discussion of proposed ACRS reports  
listed under Item 15.

- NOTE:
- Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.
  - Number of copies of the presentation materials to be provided to the ACRS - 35.

### APPENDIX III: MEETING ATTENDEES

#### 432ND ACRS MEETING

June 12-14, 1996

#### NRC STAFF

E. Brummett	NMSS
A.L. Bryant	NRR/EELB
H.O. Christensen	NRC/RII
M. Cheok	NRR/SPSB
T. Collins	NRR/DSSA
S. Dinsmore	NRR/SPSB
J. Donoghue	NRR/DSSA/SRXB
S. Flanders	NRR/PDLR
R. Frahm	NRR/DRCH/HQMB
R. Freudenberger	RGN II SRI Catawba
T. Fuchigami	NRR/SPSB
E. Goodwin	NRR/OECB
R. Jones	NRR/DSSA
K. Karwoski	NRR/DE/EMCB
P.T. Kuo	NRR/PDLR
A. Levin	NRR/DSSA/SRXB
B. Martin	NRR/DRPE
B. Meck	RES
G. Mencinsky	RES/DRA/RDB
M. Mitchell	RES/DET/EMMCB
M. Morgan	NRR - Mat'ls
M. Morris	RES/PRAB
D. O'Neal	NRR/DSSA
P. O'Reilly	AEOD/SPD
R.J. Pratt	NRR/PDLR
A. Ramsey-Smith	RES/PRAB
T. Reed	NRR/DE/EMCB
A. Rubin	RES/OSS/AEB
P. Shemanski	NRR/PDLR
L. Soffer	EDO
J. Strosnider	NRR/DE/EMCB
D. Thatcher	NRR/EELB
J.F. Williams	NRR/DRPE

#### ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

P. Abraham	Duke
M. Barron	NUS/LIS
S. Bragg	ANS Intern
B. Brooks	DOE
K. Caraway	Duke Power Co.
A. Carson	Bechtel
P. Colainni	Duke Power Co.
L. Connor	STS
T. Crawford	Duke Power Co.

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC (Con't)

L. Debl	Lamb Associates, Inc
B. Duroshul	BGE
D. Eggett	Com Ed
L. Fairobent	Lamb Associates, Inc.
P. Fulfons	NUS/LIS
C. Gallaway	NEI
M. Goldman	Health Physis Society/Univ. of California-Davis
T. Heroux	EPRI
R. Hunt	ANS intern
P. Krishna	TRW
R. Machon	TVA BFN
W. Mackny	Entergy - ANO
A. Marion	NEI
J. Matta	Winston & Strawn
G. Peterson	Duke Power Co.
F. Polaski	PECO Energy
G. Preston	TVAN - Browns Ferry
M. Quint	Embassy of Australia
B. Ricuher	DOE
T. Rockwell	MPR Associates, Inc.
P. Salas	TVA BFN
T. Shriver	TVA BFN
H. Stockwell	DOE
K. Suttan	Winston & Strawn
R. Tedesco	Scientech
H. Trellue	ANS Intern
M. Tuckerman	Duke
H. Williams	TVAN - Browns Ferry
J. Wreathall	TWWG



#### APPENDIX IV: FUTURE AGENDA

The Committee agreed to consider the following during the 433rd ACRS Meeting, August 8-10, 1996:

Supplemental Safety Evaluation Reports for Evolutionary Plant Designs - The Committee will hear presentations by and hold discussions with representatives of the NRC staff, General Electric Nuclear Energy (GENE), and ABB-Combustion Engineering (ABB-CE) regarding the proposed changes to the GENE Advanced Boiling Water Reactor (ABWR) and ABB-CE System 80+ evolutionary plant designs and the associated NRC staff Safety Evaluation Reports. Other interested parties will participate, as appropriate.

A portion of this session may be closed to discuss GENE and ABB-CE proprietary information applicable to this matter.

SECY-96-128, "Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design" - The Committee will hear presentations by and hold discussions with representatives of the NRC staff and Westinghouse Electric Corporation regarding SECY-96-128, which includes proposed staff positions on three policy issues concerning Prevention and Mitigation of Severe Accidents, Post-72-Hour Actions, and External Reactor Vessel Cooling, as well as the status of seven key technical issues pertaining to the AP600 passive plant design. Other interested parties will participate, as appropriate.

A portion of this session may be closed to discuss Westinghouse proprietary information applicable to this matter.

Risk-Informed and Performance-Based Regulations and Related Matters - The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding several issues raised in the Staff Requirements Memoranda dated May 15 and June 11, 1996, including:

- Role of performance-based regulation in the PRA Implementation Plan
- Plant-specific application of safety goals
- Requirement for risk neutrality versus the allowance for an acceptable increase in risk
- Risk-informed inservice testing and inservice inspection requirements
- Pilot applications for risk-informed and performance-based regulations

Representatives of the nuclear industry will participate, as appropriate.

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Risk-Based Analysis of Reactor Operating Experience - The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding risk-based analysis of reactor operating experience. Representatives of the nuclear industry will participate, as appropriate.

Spent Fuel Pool Cooling Issues - The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the staff review of the safety issues associated with spent fuel pool cooling systems. Representatives of the nuclear industry and other interested persons will participate, as appropriate.

APPENDIX V  
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE

[Note: Some documents listed below may have been provided or prepared for Committee use only. These documents must be reviewed prior to release to the public.]

MEETING HANDOUTS

AGENDA  
ITEM NO.

DOCUMENTS

- 1     Opening remarks
  0.     Items of Interest
- 2     Draft Regulatory Guide, DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses"
  1.     NRC Staff/NEI Presentation to the ACRS, Draft Regulatory Guide DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," and NEI 95-10, Rev. 0, "Industry Guideline for Implementing the Requirements of 1- CFR Part 54 - The License Renewal Rule," NRR, dated June 12, 1996 [Viewgraphs]
  2.     NEI 95-10, Rev. 0, "Industry Guideline for Implementing the Requirements of 1- CFR Part 54 - The License Renewal Rule," presented by Doug Walters, NEI, dated June 12, 1996 [Viewgraphs]
- 3     IPE Insights Report
  3.     Individual Plant Examination Program: Perspective on Reactor Safety and Plant Performance, presented by Mark Cunningham, Mary Drouin, Allen Camp, SNL, and John Lehner, BNL, dated June 12 [Viewgraphs]
- 4     Loss of Offsite Power at Catawba, Unit 2
  4.     ACRS Presentation, Catawba Unit 2, Loss of Off-site Power, February 6, 1996, presented by Chris Christensen, Region II, dated June 12, 1996 [Viewgraphs]
- 5     Future ACRS Activities
  5.     Future ACRS Activities - 433rd ACRS Meeting, August 8-10, 1996 [Handout #5-1]
- 6     Report of the Planning and Procedures Subcommittee

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6. Final Draft Minutes of Planning and Procedures Subcommittee Meeting - June 11, 1996 [Handout #6-1]

9 Issues Associated with Steam Generators

7. Steam Generator Rule Making, June 13, 1996, presented by Jack Strosnider, Chief Materials and Chemical Engineering Branch, Division of Engineering, NRR
8. Performance-Based Steam Generator Rule, June 13, 1996, presented by Alex Marion, NEI

10 Browns Ferry Nuclear Plant, Unit 3

9. Tennessee Valley Authority (TVA) Browns Ferry Nuclear Plant (BFN), June 13, 1996, presented by the representatives of the licensee TVA

14 Health Effects of Low-Levels of Ionizing Radiation

10. NRC's Use of the Linear Non-threshold Hypothesis for Health-Effects of Low-Levels of Ionizing Radiation, June 14, 1996, presented by, John E. Glenn, Chief radiation Protection and Health Effects Branch, Office of Research
11. Health Effects of Cellular Mutation Repair Response to Radiation: Low Dose Hormesis and High Dose Carcinogenesis, June 14, 1996, presented by Myron Pollycove, Professor Emeritus, Laboratory Medicine and Radiology, University of California, San Francisco
12. Theodore Rockwell, Résumé
13. Graph from Marvin Goldman and Ign V. Filjushkin "Low-Level Radiation Risks in People" Chinese Medical Journal 107 (8): 624-26, 1994
14. E-Mail Memorandum sent by Alan Levin to Noel Dudley, June 14, 1996, Subject, ACRS Presentation by Pollycove
15. Health Effects of Low Levels of Ionizing Radiation - 432nd ACRS Meeting, June 12, 1996 [Handout #14-1]

11 Reconciliation of ACRS Comments and Recommendations

16. Reconciliation of ACRS Comments and Recommendations [Handout #11.1]

MEETING NOTEBOOK CONTENTS

TAB

DOCUMENTS

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1. Table of Contents
2. Tentative Schedule
3. Status Report, dated February 9, 1995 [Internal Committee Use Only: Predecisional Material Attached]
4. Federal Register, 10 CFR Parts 2, 51, and 54. Nuclear Power Plant License Renewal; Revisions, dated May 1, 1995
5. NEI 95-10 (Revision 0), "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule", dated March 1, 1996
6. Letter from T.S. Kress, Chairman, ACRS, to Ivan Selin, NRC Chairman, dated March 14, 1995: Proposed Amendment to the Nuclear Power Plant License Renewal Rule (10 CFR Part 54)
7. Draft Regulatory Guide DG-1047 (Supersedes Draft DG-1009): Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses

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IPE Insights Report

8. Table of Contents
9. Tentative Agenda
10. Project Status Report, dated February 9, 1995
11. Draft NUREG XXX, Part 1, Vol. 1, "Individual Plant Examination Program: Perspectives on Reactor Safety and Plant Performance (IPE Insights Report) - Distributed previously, attachment not included
12. SECY-96-051, "Status of IPE and IPEEE Programs," from J.M. Taylor, EDO, to the Commissioners, dated March 8, 1996
13. Letter from J.M. Taylor, EDO, to T. Kress, Chairman, ACRS, Subj: "Use of Individual Plant Examinations in the Regulatory Process", dated April 10, 1996.
14. Report from T. Kress, Chairman, ACRS, to S. Jackson,

Chairman, NRC, Subj: "Use of Individual Plant Examinations in the Regulatory Process", dated March 8, 1996

4. Loss of Offsite Power at Catawba, Unit 2

15. Table of Contents
16. Tentative Schedule
17. Status Report
18. NRC Inspection Report NOS, 50-413/96-03 and 50-414/96-03, from A.F. Gibson, Director, Division of Reactor Safety, to Mr. W.R. McCollum, Site Vice-President, Catawba Site, Subj: NRC Inspection Report Nos. 50-413/96-03 and 50-414/96-03 and Notice of Violation, dated March 12, 1996
19. Catawba Main Power Distribution Operations Training Lesson Plan (for Information Only)
20. Letter from P. Tam, NRR/PM, Preliminary ASP Analysis, to Mr. W.R. McCollum, Site Vice-President, Catawba Nuclear Station, Subj: Review of Preliminary Accident Sequence Precursor Analysis of Loss of Offsite Power Event at Catawba Unit 2, dated May 22, 1996

9 Issues Associated with Steam Generators

21. Table of Contents
22. Tentative Schedule
23. Status Report, dated June 15, 1996
24. Letter from Dana Powers, ACRS Member, Subj: Defense in Depth and the Steam Generator Rule, dated June 3, 1996

10 Browns Ferry Unit 3

25. Table of Contents
26. Tentative Schedule
27. Status Report, dated June 13, 1996
28. SECY-95-264 Subj: Restart of the Browns Ferry Nuclear Plant, Unit 3, from J.M. Taylor, EDO, to the Commissioners, dated November 1, 1995



29. Memorandum from J.R. Johnson to S.D. Ebnetter, Regional Administrator, Subj: Restart of Browns Ferry Unit 3, dated November 18, 1995

14 Health Effects of Low-Levels of Ionizing Radiation

30. Table of Contents
31. Tentative Schedule
32. Status Report, dated June 14, 1996
33. Proposed Letter Final Draft 1B of ACNW Report from ACRS/ACNW, to S. Jackson, NRC Chairman, Subj: Health Effects of Low-Levels of Ionizing Radiation, dated May 17, 1996
34. Memorandum from Dr. Powers, ACRS, to Roxanne Summers, Technical Secretary, Subj: Health Effects of Low-Levels of ionizing Radiation, dated May 18, 1996
35. Memorandum from Dr. Powers, ACRS, to Roxanne Summers, Technical Secretary, Subj: Health Effects of Low-Levels of Ionizing Radiation, dated May 5, 1996
36. Memorandum from Dr. M. Steindler, ACNW, to Dr. J. Garrick, ACNW, Subj: Health Effects Latter, dated May 18, 1996
37. Memorandum from Mr. J. Carroll, ACRS, to Dr. J. Larkins, ACRS Executive Director, Subj: 3/26/95 ACRS/ACNW Joint Subcommittee Meeting, dated May 18, 1996
38. Draft Work Scope, approved by Mr. C. Paperiello, NMSS, Subj: BEIR VII "Scoping Study", dated May 2, 1996
39. Technical Proposal Summary from National Council on Radiation Protection and Measurements, to NRC, Subj: Assessment of Biological Studies Associated with Health Effects of Low-Levels of Ionizing Radiation, dated February 10, 1995